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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/634,417

08/04/2003

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1020.P17472

7949

57035 7590 03/28/2007  
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EXAMINER

CHERY, DADY

ART UNIT

PAPER NUMBER

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/634,417

Applicant(s)

STEPHENS, ADRIAN P.

Examiner

Dady Chery

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/19/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: The specification does not follow the guidelines.
2. Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR  
DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A  
COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A

“Sequence Listing” is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required “Sequence Listing” is not submitted as an electronic document on compact disc).

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show **410** in fig. 1 and **200** in fig. 2 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be

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removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

4. Claims 2, 3 and 15 are objected to because of the following informalities: The limitation may be recites in line one is not an explicit phrase, the examiner suggests the applicant to use another appropriate limitation. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a.

Claim 2 recites the limitation "each queue" in line 2. There is insufficient antecedent basis for this limitation in the claim.

6.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1,4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanterakis (US Patent 7,099,346, hereinafter Kanterakis).

Regarding claim 1, Kanterakis discloses *a method of determining when to initiate a channel access comprising: initiating a channel access if at least one of the following has occurred: a timer associated with a transmit queue has expired; and a count associated with a transmit queue has exceeded a threshold* (Abstract). Kanterakis discloses a method to initiate transmission to the station in response of a timer expired or a counter value exceeds a threshold. Which has the same function as described by this instant application.

Regarding claim 4, Kanterakis discloses: *detecting a first packet stored into an empty queue; and starting a timer associated with the queue* (Col. 6, lines 43 – 44). The RNC buffers the first packet, which implies an empty buffer; and resets two timers.

Regarding claim 5, Kanterakis discloses: *storing at least one packet in a queue; and maintaining a count of the amount of data in the queue* (Col. 6, lines 43 – 52). The RNC buffers each packet and updates it buffer size denotes by the BCN counter value.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 2,3 and 6 - 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanterakis, and in the view of Kudo (US Patent 5,179,557).

Regarding claims 2 and 3, Kanterakis discloses *the threshold may be set for a queue* (Col. 6, lines 40 – 52). The BNC counter value is associated with a buffer.

However, Kudo teaches a method where a threshold may be set for a plurality of queue (Fig. 9). Where the packet counter is associated with the threshold.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the threshold for a plurality of queues for distributing data buffer with high priority (Col. 2, lines 65 – 68).

Regarding claim 6, Kanterakis discloses *a method of selecting a transmit queue from a group of eligible transmit queues for transmission: determining if any of the eligible queues have a timer expired; selecting one of the queues having an expired timer if there is an eligible queue having an expired timer; otherwise, determining if any of the eligible queues have a count that exceeds a threshold; and selecting one of the queues having a count that exceeds the threshold if there is an eligible queue having a*



*count that exceeds the threshold.* Kanterakis discloses a method for selecting a packet eligible for transmission from a queue. The selection is based on certain events like timer expiration and counter exceed their threshold value as described by this instant application (Col. 6, lines 40 – Col 7, lines 5).

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Col. 5, lines 23 – 62).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 7, Kanterakis discloses selecting a *non-empty queue* (Col. 6, lines 40 –41). The first receives packets implies that the queue was empty before it starts receive packets.

Regarding claim 8, Kanterakis discloses the method comprising: *detecting a first packet stored in a queue; and starting a timer associated with the queue* (Col. 6, lines 43 – 44). The RNC buffers the first packet, and resets two timers, which implies starting at least one timer associated with the queue.

Regarding claim 9, Kanterakis discloses *the method: storing at least one packet in a queue; and maintaining a count of the amount of data in the queue* (Col. 6, lines 40 – 52).

Regarding claim 10, Kanterakis discloses *the count represents an amount of at least one of packets and bytes* (Abstract). The BNC counter value represents the amount of buffered data.

Regarding claim 11, Kanterakis discloses *a method the selecting one of the queues having a count comprises selecting one of the queues having a greatest count* (Col. 7, lines 26 – 30). The BNC counter value exceeds the BCNX the MS sends all accumulated packets is considered as the queue having the greatest count.

Regarding claim 12, Kanterakis discloses *the method of selecting one of the queues having an expired timer comprises selecting the eligible queue having a timer that expired the longest ago* (Col. 6, lines 59 – 64). Where the base station transmits the oldest of the accumulated data.

Regarding claim 13, Kanterakis discloses *the method for selecting one of the queues having an expired timer comprises selecting the eligible queue having an expired timer that has the oldest data in the queue* (Col. 6, lines 59 – 67).

Regarding claim 14, Kanterakis discloses *the method of selecting one of the queues having an expired timer comprises selecting the eligible queue having at least one of:*

*an expired timer that has the oldest data in the queue;* (Col. 6, lines 59 – 67).

*having a timer that expired the longest ago;* (Col. 6, lines 59 – 64). Where the base station transmits the oldest of the accumulated data.

*and a combination of an expired timer that has the oldest data in the queue and that expired the longest ago (Col.6, lines 59 – col. 7, lines 5).*

Kanterakis does not disclose a plurality of queues. However, Kudo teaches a plurality of queue (Fig. 8).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group of selective queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 15, Kanterakis discloses *a queue may be eligible based on comparing the queue and status of the queue to channel access rules* (Abstract). Where the channel access rules are timer expired and count exceeds a threshold.

Regarding Claim 16, Kanterakis discloses all the limitations of claim 16, except *queue eligibility is defined based on queues assigned to packets of a specified priority.*

However, Kudo teaches *queue eligibility is defined based on queues assigned to packets of a specified priority* (fig.8 and Col. 2, lines 31 –40).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to define the eligibility of a queue base on its specified priority for immediateness and discarding rate (Col. 2, lines 36 –37).

Regarding claim 17, Kanterakis discloses *a method comprising: determining when to initiate a channel access comprising: initiating a channel access if at least one*

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*of the following has occurred: a timer associated with a transmit queue has expired; and a count associated with a transmit queue has exceeded a threshold; (Abstract).*

Kanterakis discloses a method to initiate transmission to the station in response of a timer expired or a counter value exceeds a threshold. Which has the same function as described by this instant application.

Kanterakis fails to teach *selecting a transmit queue from a group of eligible transmit queues for transmission*. However, Kudo teaches *selecting a transmit queue from a group of eligible transmit queues for transmission* (Fig. 8, Col. 2, lines 14 - 45). The send packet decider selects a transmitting from an eligible transmit queues base on their class priority, their timer and the mount data contains on that queue.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kudo into the teaching of Kanterakis for transmitting a packet in packets queue on the basis of the stay time of each packet (Col. 5, lines 30 –35).

Regarding claim 18, Kanterakis discloses *a method of selecting a transmit queue from a group of eligible transmit queues for transmission: determining if any of the eligible queues have a timer expired; selecting one of the queues having an expired timer if there is an eligible queue having an expired timer; otherwise, determining if any of the eligible queues have a count that exceeds a threshold; and selecting one of the queues having a count that exceeds the threshold if there is an eligible queue having a count that exceeds the threshold*. Kanterakis discloses a method for selecting a packet

eligible for transmission from a queue. The selection is based on certain events like timer expiration and counter exceed their threshold value as described by this instant application (Col. 6, lines 40 – Col 7, lines 5).

Kanterakis does not expressly mention if the selection is from a multiple queues. However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Col. 5, lines 23 – 62).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

Regarding claim 19, Kanterakis discloses a method for transmitting a packet from a buffer, determining if a queue has an expired timer and determining if any queue has a count exceeds the threshold. If a queue meets one of those requirements it is eligible for transmission (Col. 6, lines 40 – Col. 7, lines 5).

Kanterakis does not expressly mention if the eligible queue is based on channel access rules. However, Kudo teaches a method for transmission of data from a queue base on their priority rule as described by this instant application (Col. 2, lines 61 – Col 3, lines 8).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kudo into the teaching of Kanterakis for securing the transmission quality (Col. 3, lines 67 – Col. 4 lines 1).

Regarding claims 20 and 21, Kanterakis disclose an *apparatus comprising:*

*a transceiver; (Fig. 2, 17 and Col. 5, lines 57 –59).*

*at least one transmit queue, each queue including a count indicating an amount of data in the queue, and a threshold; a timer associated with each of said transmit queue; and wherein the apparatus is adapted to initiate a channel access if the timer of one of the queues has expired or the count of one of the queues exceeds the threshold* (Abstract). Kanterakis disclose at least a queue having BCN counter value representing the amount of buffered data and timer for calculation the expiration time. The RNC initiates a transmission in response to certain event including timer expiration and BNC count value exceeds a threshold. But Kanterakis fails to teach a plurality of queue.

However, Kudo teaches a method for selecting a transmitting from a group of eligible queues (Col. 5, lines 23 – 62).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a queue from a group a queues for the purpose of providing a packet communication system which can select a queue to be immediately transmitted through high- speed calculation (Col. 5, lines 11 –13).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dady Chery whose telephone number is 571-270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm Est..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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RICKY Q. NGO

SUPERVISORY PATENT EXAMINER